REMARKS/ARGUMENTS

Claims 1-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP 2001-085505 (Ishizuka et al.) in view of U.S. Patent No. 6,001,760 (Katsuda et al.). Reconsideration of the rejection is respectfully requested.

With regard to Ishizuka et al., a susceptor disclosed in Ishizuka et al. is the same as that disclosed in the present specification as related art. In the susceptor of Ishizuka et al., power supply terminals are made of a conductive aluminium-nitride-tungsten-composite-sintered-member.

In contrast, according to claims 1 and 6 of the present invention, power supply terminals are made of a conductive aluminium-nitride-tantalum-nitride-composite-sintered-member. Tantalum-nitride is not used in any of the citations cited in the Office Action.

With regard to Katsuda et al., the Examiner states, "Katsuda et al. teaches the interchangeability of Ta and W. Both are discussed as refractory metals with high melting points and the motivation to use tantalum instead of tungsten is known to prevent contamination. Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to use an aluminum nitride tantalum-nitride-composite sintered member instead of an aluminum nitride tungsten-nitride-composite sintered member," (Office Action, page 2, last paragraph, emphasis supplied).

However, it is respectfully submitted that the Examiner erroneously quoted "tungsten-nitride." Ishizuka et al. actually only discloses using tungsten. Tantalum-nitride in the present invention is not obvious because the tantalum-nitride is a ceramic, i.e., a non-metal, material. The tungsten used in Ishizuka et al., in contrast, is a metal material.

Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ishizuki et al. in view of Katsuda et al. as applied to claims 1-6, and further in view of Yamada et al. (U.S. Patent No. 6,134,096). Reconsideration of the rejection is respectfully requested.

Similarly to claims 1 and 6, claim 7 provides that "an aluminium-nitride-tantalum-nitride-composite-sintered-member" is filled as a power supplying terminal. Again, as previously mentioned, tantalum-nitride is not used in any of the citations cited in the office Action, and, thus,

claim 7 is patentably distinguishable over Ishizuki et al. and Katsuda et al. for the reasons recited above with respect to claims 1 and 6.

With regard to Yamada et al., in lines 14 to 20, of column 8, it is disclosed that "the electrode is preferably constituted by a metallic bulky body," (emphasis supplied). Yamada et al. does not disclose using a ceramic material for the electrode, as is claimed in claim 7, which has been amended to state that the inner electrode is "an aluminum-nitride-tantalum-nitride-composite-sintered-member." Antecedent basis for the amendment is found in the specification on page 11, lines 1-4. As previously noted, tantalum-nitride is a ceramic material.

In addition, in pages 21-27 of the present specification, with respect to durability of the electrode-built-in susceptor, electrode-built-in-susceptors having the power supply terminals made of the conductive aluminium-nitride-tantalum-nitride-composite-sintered-member in accordance with examples 1-3, and an electrode-built-in susceptor having the power supply terminals made of the conductive aluminium-nitride-tungsten-composite-sintered-member in accordance with a comparison example, are compared.

The comparison was conducted under the following thermal load cycle conditions:

electricity was applied to an inner electrode 15 in the electrode-built-in susceptors obtained in examples 1 to 3 via the protruding electrode 32 and the power supplying terminal 16;

the temperature in the electrode-built-in susceptors was raised to a predetermined temperature (500°C) at a heating rate such as 20°C/min under ordinary atmospheric conditions;

the temperature (500°C) was maintained for ten hours; and

after that, the temperature was cooled down to room temperature (25°C).

When such a thermal load cycle was repeated 300 times, no cracking was observed in the electrode-built-in susceptor of the present invention.

In contrast, in the comparative example, when the same cycles were repeated seven times to the electrode-built-in susceptor for the comparative example, the power supplying terminals 16, 16 were oxidized, and the electrode-built-in susceptor was broken.

The electrode built-in-susceptor of the present invention, having such a superior durability, is not obvious from any of the citations cited in the Office Action because this effect is realized by

the power supply terminal being made of the conductive aluminium-nitride-tantalum-nitride-composite-sintered-member.

In view of the foregoing amendments and remarks, the allowance of claims 1-7 is respectfully requested.

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